

**MCCALL SUMMER CHINOOK HATCHERY**

**OPERATION AND MAINTENANCE  
ANNUAL REPORT**

**OCTOBER 1, 2009 TO SEPT. 30, 2010**

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FISH HATCHERY MANAGER II**

## INTRODUCTION

### Operations

McCall Summer Chinook Hatchery was the first hatchery to be built for Idaho under the Lower Snake River Compensation Plan and has been in operation since the fall of 1979. Production goals for the hatchery are 1,000,000 Summer Chinook Salmon smolts to be reared and released into the South Fork of the Salmon River. The mitigation goal is to return 8,000 adult Summer Chinook Salmon above Lower Granite Dam.

The brood year 2009 pre-smolts on station are in good condition at this time. Both outside production ponds are in use, pond 1 is loaded with 535,551 fish, and pond 2 is loaded with 534,949 fish for a total of 1,070,500 fish outside. There are no supplementation fish on station. The reserve fish are marked with ad-clips and ad-clips/coded wire tags (CWT). There are 106,138 Johnson Creek fish to be released by the Nez Perce tribal fishery into Johnson Creek. The eggs from the high BKD tested females were culled. There will be a portion of the fish PIT tagged in the spring of 2011, just prior to release.

The 2010 summer chinook spawning run at the South Fork Salmon trap was another good adult summer chinook return. The trap and weir were operational on June 23. The operation concluded on September 13, 2010, with a total of 7,737 fish trapped over a period 83 days.

There was a total of 2,403,224 green eggs taken from 451 females with an average fecundity of 5,345 eggs per female, and an average eye-up of 90%. There were 320,088 eyed eggs

transferred to the Sho-Bans for their egg box program this year, and an additional 339,000 eggs from 66 females were shipped to green to the Clearwater Hatchery to start a Summer Chinook program. There were 4 females culled on site this year during spawning. The eggs from 80 females were culled (15 high positive BKD, the rest due to mixing in the incubation trays and culling low positives back to a full hatchery). The integrated broodstock program was implemented this year at the South Fork Trap. There were eggs from 72 hatchery or reserve females fertilized with milt pre-collected from an equal number of natural males. The subsequent offspring will be held separately and marked with 100% CWT and no ad-clip. There will a 250,000 smolt release of integrated fish in the spring of 2012.

Nez Perce fisheries staff held Johnson creek adult salmon on site at the South Fork trap facility. These fish were held with the South Fork fish until first sort when the males were placed in the circular tank to be held through spawning. All of the Johnson creek fish were uniquely marked to distinguish them from the South Fork stock. There were 28 females were spawned, producing 128,900 eyed eggs. The fecundity for these fish was 4,774 eggs per female, eye-up was 79.3%. There were no Johnson Creek females culled due to BKD.

## Personnel

There was a change in permanent personnel at the McCall hatchery this past year. Steve Kammeyer, assistant manager,

transferred to the Cabinet Gorge hatchery at the end of September. A replacement should be on station in January. Jamie Mitchell will be the new assistant manager. There were 8 temporary employees employed during the spring and summer months.

Gene McPherson

FHM II

AHM

Joel Patterson

Fish Culturist

#### Miscellaneous

There were roof repairs completed on residences 1 and 3 this past year. An insulated, heated chemical storage unit was obtained and installed to house safely formalin to remove it from the hatchery building. The light control system for the hatchery building is in the works to be replaced this coming spring. There were no other major projects undertaken at the hatchery this year.

- A. Adult Returns to Hatchery - Species  
No adults return directly to McCall Hatchery.
- B. Adults Trapped off Hatchery, Spawned and Eggs Returned to Hatchery  
Summer Chinook (BY 10)  
Where Trapped: South Fork Salmon River trap  
Dates Trapped: 6/23/10 through 9/13/10  
No. Females Trapped: 3,853

No. Males Trapped:	2,585
No. Males and Females Released to Spawn Naturally:	1,349
No. of Jacks Trapped:	1,299
Mortality of Adult Returns:	366

C. Spawning Record

South Fork Summer Chinook (BY 10)

Dates Spawned	No. of Egg/spawn Day	No. Females & Males used/day	
		Females	Males
8/14	24,460	4	4
8/17	192,691	37	37
8/20	413,181	81	81
8/24	494,456	95	95
8/27	654,300	120	120
8/31	428,465	78	78
9/03	195,671	36	36
Totals	2,403,224	451	451

All of the eggs taken were water hardened for an hour in a 100 ppm iodophor treatment prior to being transported to McCall Hatchery. Individual mesh bags were used for segregation purposes.

Total Number of Eyed Eggs:	1,851,516
Number of Eggs Retained for Rearing:	1,110,222
Number of Eggs Shipped:	659,088
Number of Eggs Culled (BKD):	430,590
Date of Last Spawning:	9/03/10
Date Weir Removed:	9/13/10

D. Rearing to Fry Stage

Summer Chinook (BY 09)

Hatched from Eyed Eggs:	1,082,009
Percent Hatched:	N/A
Percent Mortality to Stocking:	N/A
Total No. of Fry Stocked:	0
Total Weight of Fry Stocked:	0
Average No. /Lb. of Fry Stocked:	0
Conversion Rate:	

E. Rearing to Fingerling Stage

Summer Chinook (BY 09)

No. of Fingerling Produced:	1,070,868
Weight of Fingerling Produced:	12,129
Total No. of Fingerling Stocked:	0
Total Weight of Fingerling Stocked:	0
Percent of Mortality to Stocking:	N/A
Conversion:	0.81

F. Smolts Reared

	<u>Summer Chinook (BY 08)</u>
No. Smolts Produced:	1,037,600
Weight of Smolts Produced:	49,550
Average No./Lb. of Smolts:	20.94
Percent Mortality to Stocking:	2.44*
Conversion Rate:	0.87

\*mortality from sac fry.

G. Food Fed and Weight Gain

Total pounds Food Fed:	46,830
Conversion Rate - All Sizes:	0.89
Total Weight Gain - All Sizes:	52,616

H. Stocking

	<u>Summer Chinook (BY 08)</u>	
Total No. of Distribution Trips:	24	
No. and wt. of Fry Stocked BY 08	0	0
No. and wt. of Fing. Stocked BY 08	0	0
No. and wt. of Smolts Stocked BY 09	1,037,600	49,550

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Date	Location	Weight	#/Lb	# Released
3/23/10	S.FK. Salmon R.	21,000	20.94	439,740
3/24/10	S.FK. Salmon R.	16,800	20.94	351,792
3/25/10	S.FK. Salmon R.	11,751	20.94	246,068
Total Released		55,265		1,037,600

In addition to the normal production of the South Fork Summer Chinook program, the hatchery crew also reared 99,618 brood year 2008 summer chinook smolts for the Johnson Creek program in cooperation with the Nez Perce tribal fishery program.

These fish averaged 29.1 fish per pound for 3,423 pounds. The Nez Perce fishery personnel transported and released these fish

into Johnson Creek during the period of March 15 - 17, 2010, for the first group and April 5 - 6, 2010, for the second group.

This was the first year for the Nez Perce Fishery's split-release study providing for approximate equal releases of elastomer and non-elastomer marked fish. Each sub-population was PIT tagged to allow for tracking out migration survival to Lower Granite Dam.